US008613145B2

(12) **United States Patent**
Poole et al.

(10) **Patent No.: US 8,613,145 B2**
(45) **Date of Patent: Dec. 24, 2013**

(54) **CUTTING TOOL WITH DOUBLE COMPOUND LEVERAGE**

(76) Inventors: **Robert N. Poole**, Scottsdale, AZ (US); **Daniel Poole**, Glendale, AZ (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 507 days.

(21) Appl. No.: **12/880,857**

(22) Filed: **Sep. 13, 2010**

(65) **Prior Publication Data**

US 2011/0083327 A1 Apr. 14, 2011

Related U.S. Application Data

(60) Provisional application No. 61/242,547, filed on Sep. 15, 2009.

(51) **Int. Cl.**
B26B 17/02 (2006.01)

(52) **U.S. Cl.**
USPC **30/192**; 30/191; 30/193

(58) **Field of Classification Search**
USPC 30/191, 192, 249, 250, 251, 193; 72/409.11, 409.12
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

146,829	A *	1/1874	Lindsay	81/351
720,835	A *	2/1903	Moore	30/193
832,804	A *	10/1906	Oneal	30/193
914,910	A *	3/1909	Alley	30/191
1,076,667	A *	10/1913	Farrington	30/191
1,179,220	A *	4/1916	Roberts	30/193
D50,029	S *	12/1916	Porter	D8/58
1,247,716	A *	11/1917	Porter	30/193
1,254,284	A *	1/1918	Southwood	30/252
1,572,787	A *	2/1926	Glee et al.	30/252
1,586,297	A *	5/1926	Du Bois	72/387
1,760,627	A *	5/1930	Bernard	30/192
1,860,290	A *	5/1932	Lebherz	7/133
2,577,638	A *	12/1951	Tibbetts	30/193
3,084,575	A *	4/1963	Klein	72/409.11
3,182,485	A *	5/1965	Sund	72/409.11
3,704,620	A *	12/1972	Allen	72/409.01
4,505,038	A *	3/1985	Porter	30/193
5,898,998	A *	5/1999	Deville	30/193
D436,815	S *	1/2001	Yang	D8/52
6,226,874	B1 *	5/2001	Jansson	30/192
7,346,991	B1 *	3/2008	Janson	30/244
7,444,851	B1 *	11/2008	Janson	72/409.12
2011/0083327	A1 *	4/2011	Poole et al.	30/192

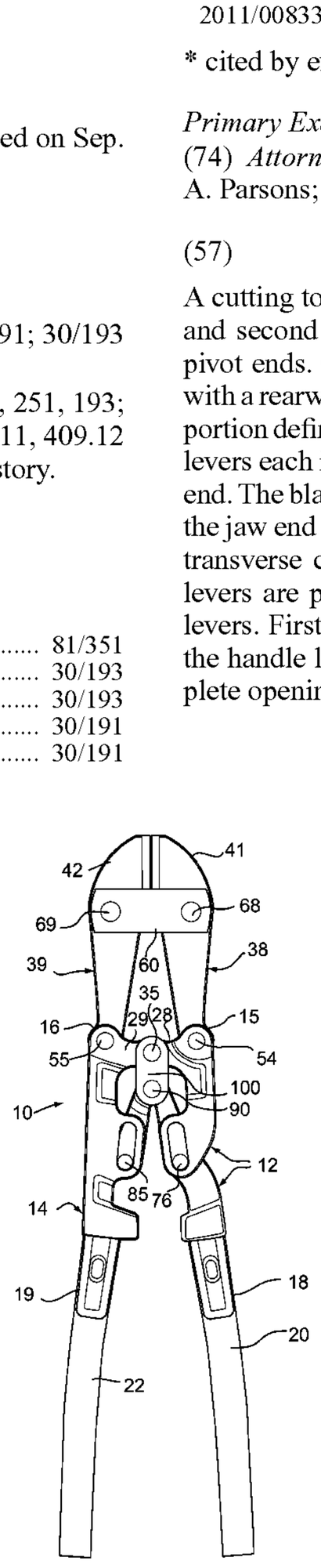
* cited by examiner

Primary Examiner — Hwei C Payer
(74) *Attorney, Agent, or Firm* — Parsons & Goltry; Robert A. Parsons; Michael W. Goltry

(57) **ABSTRACT**

A cutting tool with double compound leverage includes first and second opposed handle levers having handle ends and pivot ends. One of the handle levers includes a double link with a rearward portion defining the handle end and a forward portion defining the pivot end. First and second opposed blade levers each include a jaw end with a cutting blade and a lever end. The blade levers are each pivotally attached intermediate the jaw end and the lever end at spaced apart pivot points to a transverse coupling element. The pivot ends of the handle levers are pivotally attached to the lever ends of the blade levers. First and second compound linkage pivotally couple the handle levers and the blade levers so as to provide complete opening and closing of the cutting jaws.

24 Claims, 6 Drawing Sheets



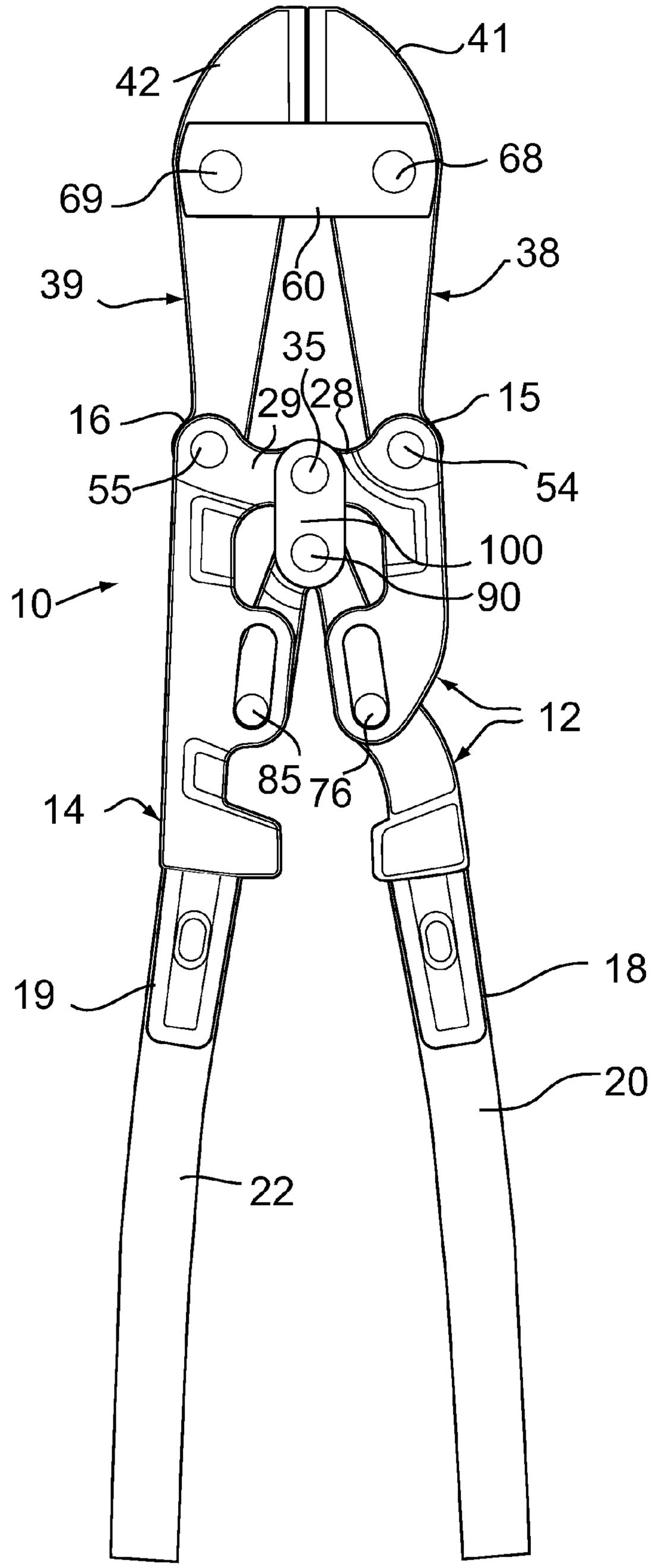

41
42
68
69
38
39
60
35
29
28
15
16
54
55
100
10
90
12
85
76
14
18
19
20
22

FIG. 1

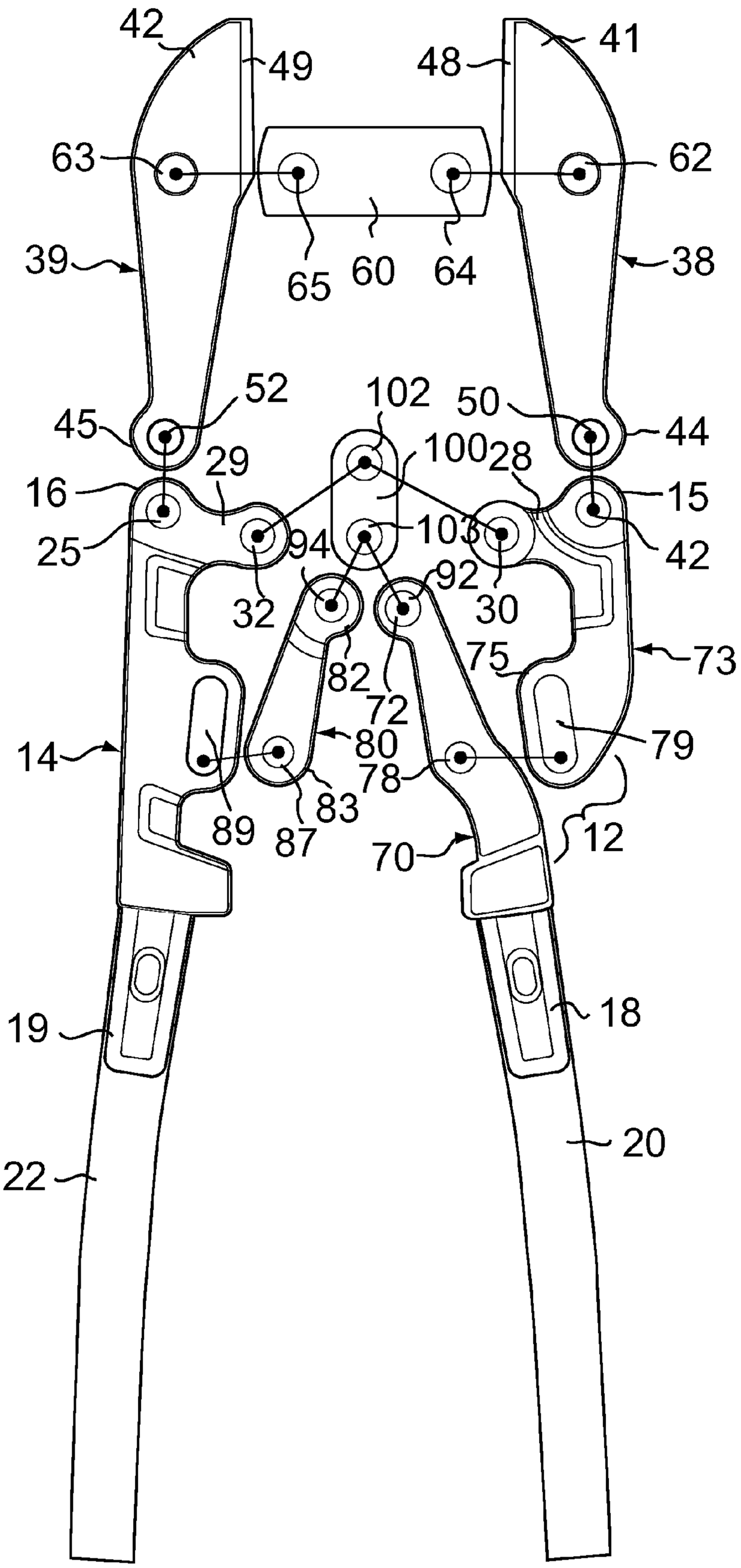

42
49
48
41
63
62
39
65
60
64
38
52
102
50
45
44
100
28
29
16
15
25
103
94
42
92
32
30
75
73
82
72
80
79
14
78
83
89
87
12
70
19
18
22
20

FIG. 2

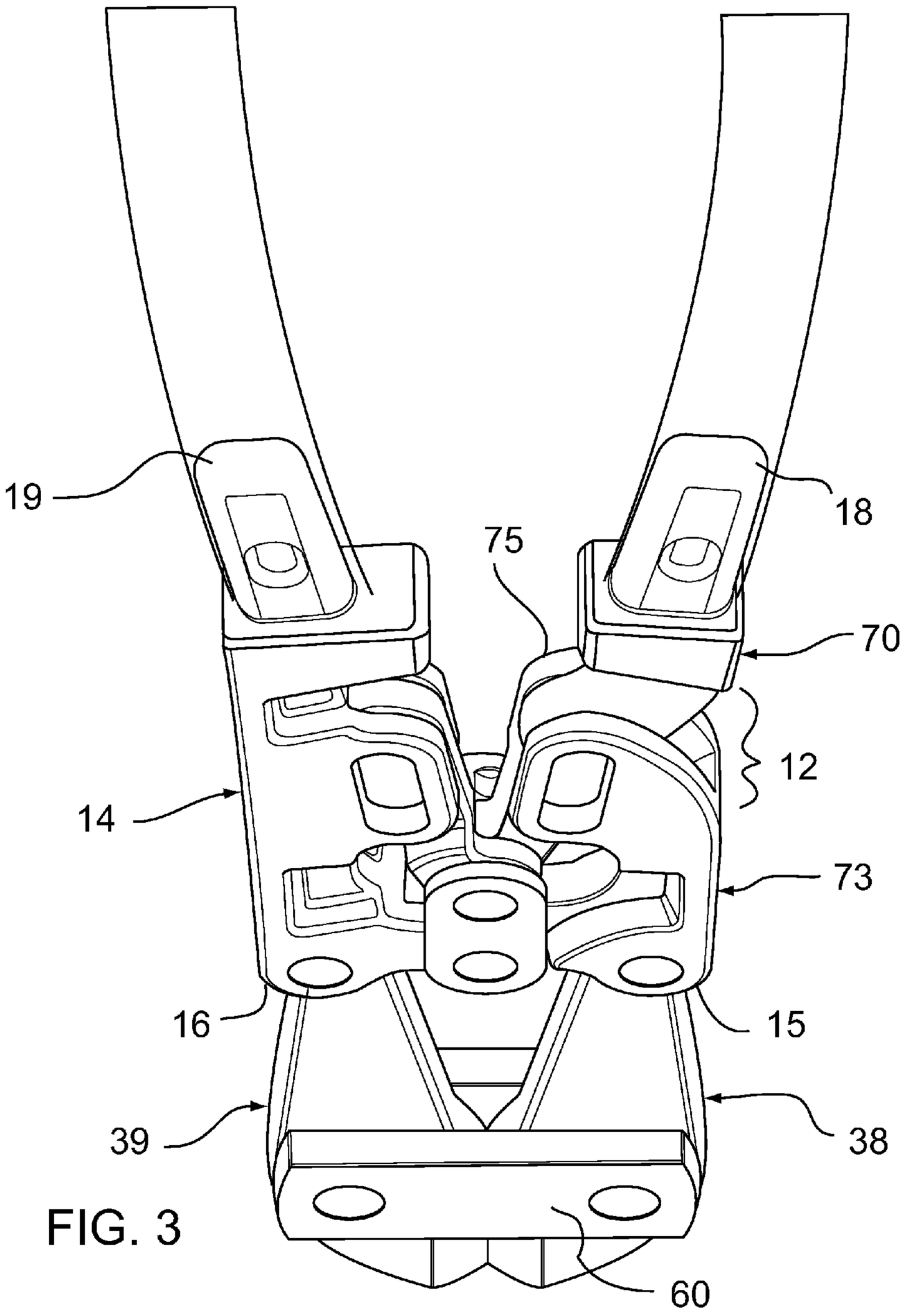


FIG. 3

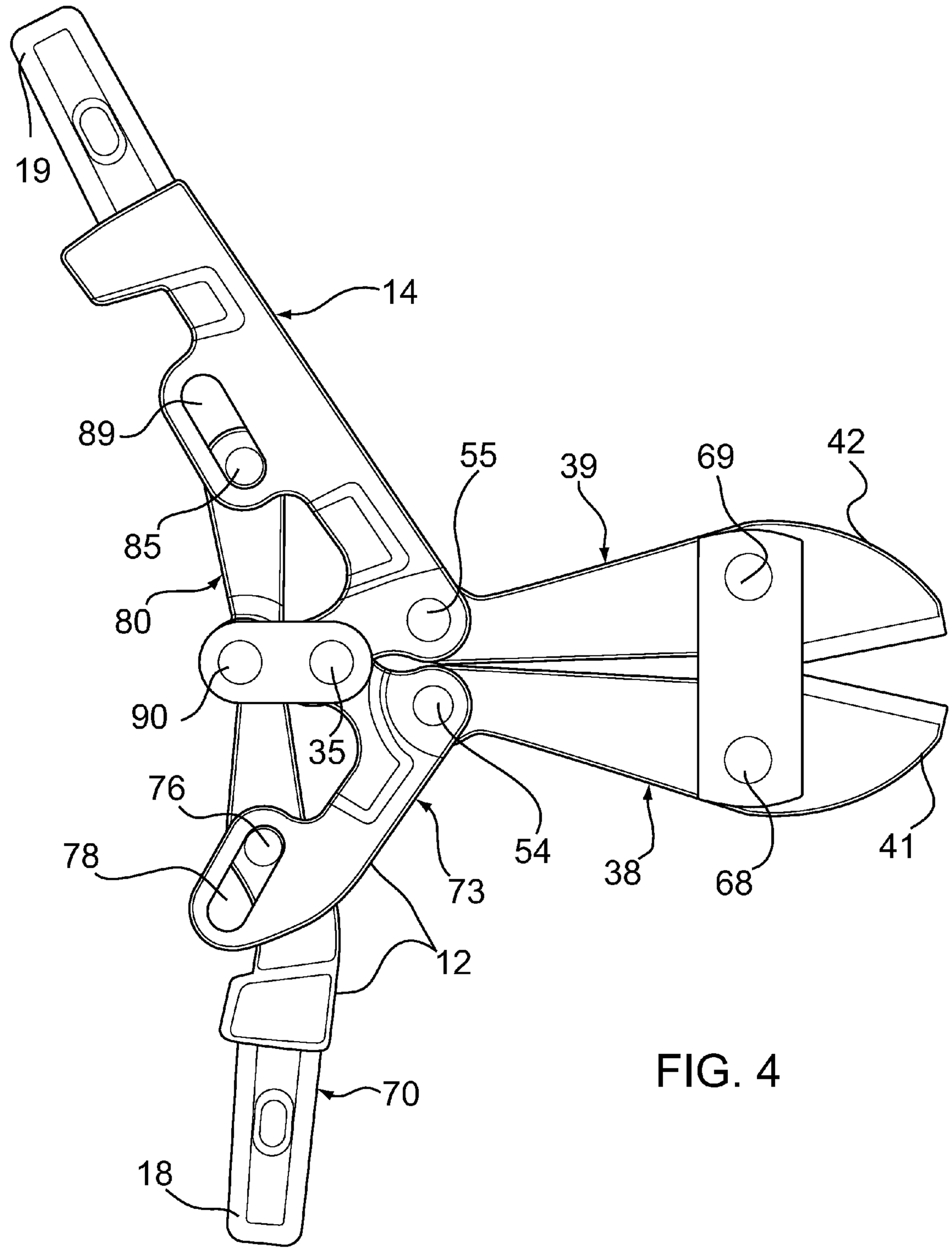


FIG. 4

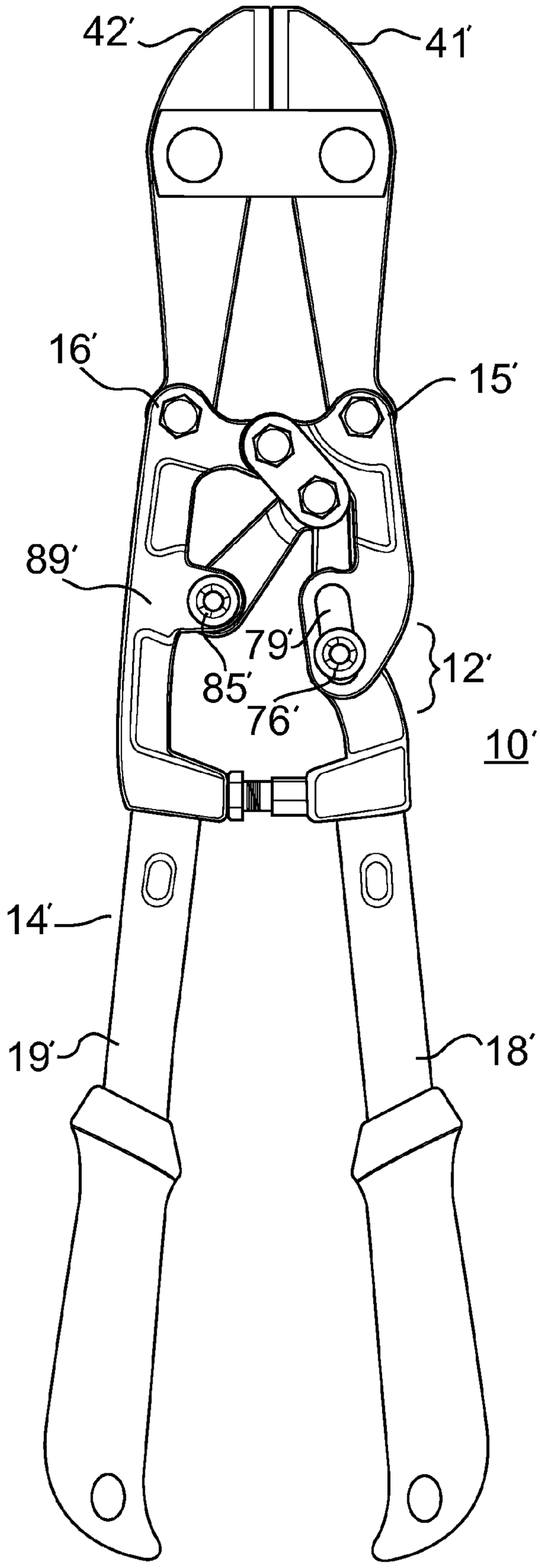


FIG. 5

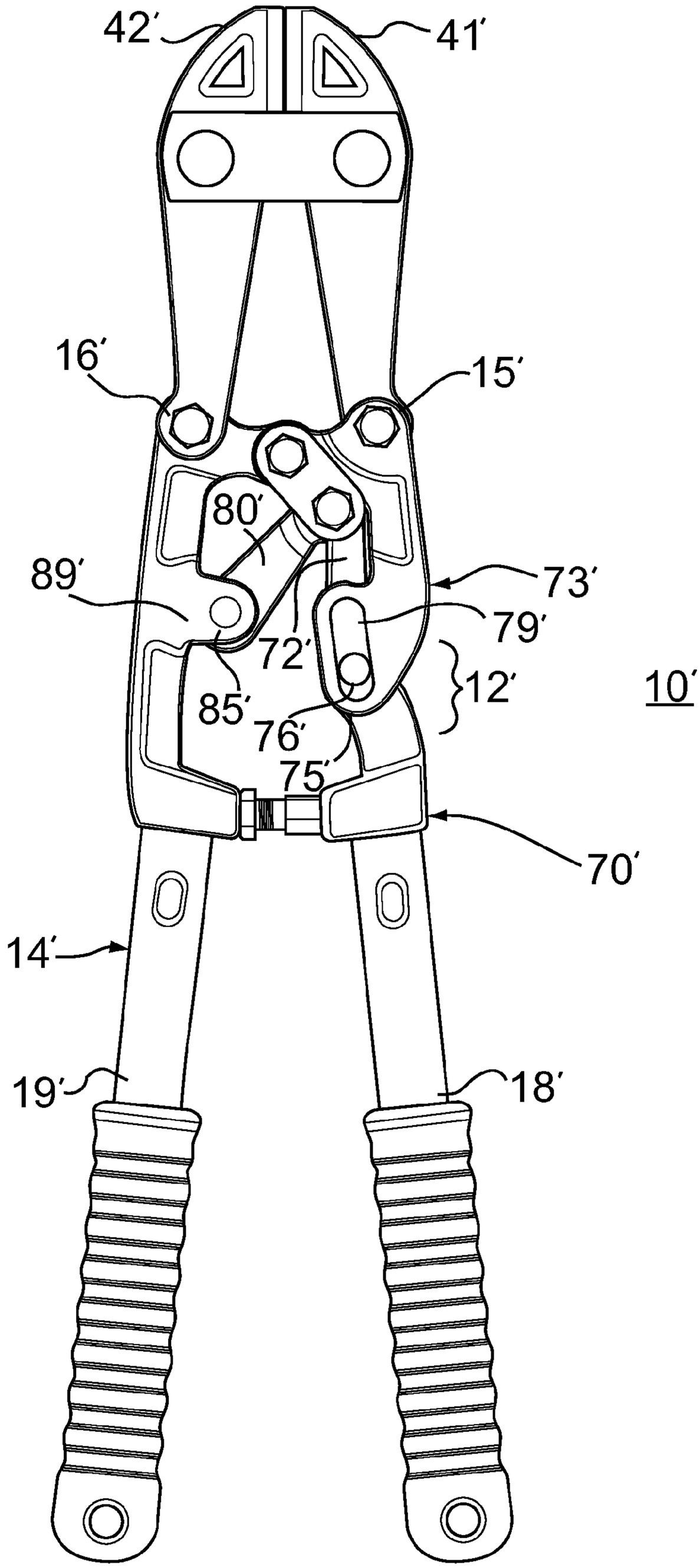


FIG. 6

CUTTING TOOL WITH DOUBLE COMPOUND LEVERAGE

CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims the benefit of U.S. Provisional Application No. 61/242,547, filed 15 Sep. 2009.

FIELD OF THE INVENTION

This invention relates to cutting devices.

More particularly, the present invention relates to cutting devices using compound leverage.

BACKGROUND OF THE INVENTION

Double compound cutting tools are known in the art, such as those disclosed in U.S. Pat. No. 7,346,991 and U.S. Pat. No. 7,444,851 incorporated by reference herein. In each of these prior art devices the cutting jaws are pivotally attached adjacent a rear end by a single pivot pin.

In some compound cutting tools the rear ends of the cutting jaws are attached at spaced apart pivot points by a transverse coupling element to provide increased power to the cutting jaws. However, previous attempts at forming double compound cutting tools having transverse coupling elements forming separate, spaced apart pivots points have had operating problems. Specifically, the double compound mechanism, while providing significantly increased power to the cutting jaws, also inhibits the opening of those jaws. In other words, due to the presence of a second compound linkage, the jaws cannot be fully opened. In these double compound mechanisms the jaws are limited to opening less than approximately half their fully opened position.

It would be highly advantageous, therefore, to remedy the foregoing and other deficiencies inherent in the prior art.

Accordingly, it is an object of the present invention to provide a new and improved cutting tool with leverage for additional cutting power in which the jaws are capable of fully opening.

It is a further object of the present invention to provide a new and improved cutting tool with leverage for additional cutting power including first compound linkage and second compound linkage pivotally linked together to provide complete opening of the cutting jaws.

SUMMARY OF THE INVENTION

Briefly, to achieve the desired objects of the instant invention in accordance with a preferred embodiment thereof, a cutting tool with double compound leverage is provided. The cutting tool includes first and second opposed handle levers each including handle ends and pivot ends, one of the first and second levers including a double link with a rearward portion defining the handle end and a forward portion defining the pivot end. First and second opposed blade levers each include a jaw end with an inwardly directed cutting blade and a lever end. The first and second blade levers are each pivotally attached intermediate the jaw end and the lever end at spaced apart points to a transverse coupling element. The cutting blades and jaw ends define cutting jaws. One each of the pivot ends of the first and second opposed handle levers are pivotally attached to one each of the lever ends of the first and second opposed blade levers. First compound linkage and second compound linkage pivotally couple the first and second opposed handle levers and the first and second opposed blade levers so as to provide complete opening and closing of the cutting jaws.

In a specific embodiment of the present invention, a cutting tool with double compound leverage capable of completely opening and closing is provided. The cutting tool includes a first handle lever including a handle end and a pivot end and a second handle lever including a double link with a rearward portion defining a handle end and a forward portion defining a pivot end. First and second opposed blade levers each include a jaw end with an inwardly directed cutting blade and a lever end. The first and second blade levers are each pivotally attached intermediate the jaw end and the lever end at spaced apart points to a transverse coupling element, the cutting blades and jaw ends defining cutting jaws. The pivot end of the first opposed handle lever is pivotally attached to the lever end of the first opposed blade lever defining a first pivot element. The pivot end of the second opposed handle lever is pivotally attached to the lever end of the second opposed blade lever defining a second pivot element. First compound linkage pivotally couples the first pivot element and the second pivot element to a third pivot element. Second compound linkage pivotally couples the first and second opposed handle levers to the third pivot element and the forward portion of the second handle lever to the rearward portion. The second compound linkage includes at least one movable pivot element formed by a pivot movable within a longitudinally extending slot and pivotally coupling one of the first and second opposed handle levers to the second compound linkage. The second compound linkage is formed so that the at least one pivot movable within the longitudinally extending slot is positioned adjacent a rear end of the slot when the cutting jaws are closed and adjacent a front end of the slot when the cutting jaws are completely open.

BRIEF DESCRIPTION OF THE DRAWINGS

Specific objects and advantages of the invention will become readily apparent to those skilled in the art from the following detailed description of a preferred embodiment thereof, taken in conjunction with the drawings in which:

FIG. **1** is top plan view of a cutting tool with double compound leverage, in the closed/cutting position, according to the present invention;

FIG. **2** is an exploded top view of the cutting tool of FIG. **1**;

FIG. **3** is an isometric view of the cutting tool of FIGS. **1** and **2**;

FIG. **4** is a top plan view of the cutting tool of FIG. **1** in an open position;

FIG. **5** is top plan view of a modified cutting tool with double compound leverage, in the closed/cutting position, according to the present invention; and

FIG. **6** is a top plan view of the cutting tool of FIG. **5** illustrating the various components in detail.

DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT

Turning now to the drawings, attention is directed to FIGS. **1** and **2** which illustrate a cutting tool generally designate **10**. Cutting tool **10** has a double compound leverage mechanism which greatly increases the cutting force applied by an individual utilizing the tool. For purposes of orientation in the description of the present invention, forward is a direction toward the cutting end of the tool, and rearward is a direction toward the handle end of the tool. Additionally, inward or inwardly is a direction toward a center line of the tool extend-

ing between the cutting end and the handle end, and outward or outwardly is away from the center line. Double compound cutting tools are known in the art, such as those disclosed in U.S. Pat. No. 7,346,991, and U.S. Pat. No. 7,444,851 incorporated by reference herein.

Cutting tool **10** includes a pair of opposing handle levers **12** and **14**, each having a pivot end **15**, **16** and a handle end **18**, **19**, respectively. Here it should be noted that handle lever **14** extends in a continuous piece from handle end **19** to pivot end **16** but handle lever **12** is formed of a double link, including a rearward portion **70** having handle end **18** and forward portion **72**, and a forward portion **73** having a pivot end **15**, and a rearward end **75**. Handle lever **12** and the coupling of the double link are explained in more detail below. Suitable handles **20**, **22** are attached to handle ends **18**, **19**. While handles are attached to handle levers **18**, **19** in this preferred embodiment, it will be understood that the handle levers themselves can be extended to serve as handles if desired.

In this embodiment, pivot ends **15**, **16** are bifurcated or laterally slotted, as can be seen with additional reference to FIG. **3**, with apertures **24**, **25** extending therethrough. Pivot ends **15**, **16** also each include an inwardly directed extension **28**, **29** through which apertures **30**, **32** extend. Extensions **28** and **29** overlap with apertures **30** and **32** aligning and receiving a pivot pin to form a pivot element **35**. It will be understood by those of ordinary skill in the art that pivot element **35** can be formed in different well known manners, such as using nuts and bolts, pivot pins, rivets, and the like. It will be further understood that this holds true for each of the pivots in the following description.

Blade levers **38**, **39** each include a jaw end **41**, **42** and a lever end **44**, **45**, respectively. Jaw ends **41**, **42** each include an inwardly directed cutting blade **48**, **49**, respectively, which are movable between an open position and a closed or cutting position as illustrated. Pivot ends **15**, **16** are pivotally coupled to blade levers **38**, **39** at lever ends **44**, **45**, respectively. Lever ends **44**, **45** each have an aperture **50**, **52** therethrough. Lever ends **44**, **45** are positioned within the bifurcation or lateral slot of pivot ends **15**, **16**, with apertures **50**, **52** aligned with apertures **24**, **25**, respectively. Coupling members such as bolts, pins or the like, extend concurrently through apertures **24**, **50** and **25** **52** to form pivot elements **54** and **55**, respectively. Pivot elements **54** and **55** couple handle levers **12**, **14** with blade levers **38**, **39**, and permit pivoting movement therebetween. As can be seen in FIG. **1**, pivot element **35** is positioned rearwardly of pivots **54** and **55**. Extensions **28** and **29** form a first compound linkage between pivot elements **35**, **54**, and **55**.

A transverse coupling element **60**, such as plate or plates (e.g. upper and lower plates), is pivotally coupled to and extends between blade levers **38**, **39** intermediate jaw ends **41**, **42** and lever ends **44**, **45**. Pins inserted concurrently through apertures **62**, **63** formed in blade levers **38**, **39** and apertures **64**, **65** formed through coupling element **60** is employed, in this preferred embodiment, to form pivots **68** and **69** pivotally coupling element **60** to each of blade levers **38**, **39**. Thus, in operation, as handle end **18**, **19** of handle levers **12**, **14** are moved outwardly (away from each other), pivot ends **15**, **16** move toward one another about pivot **35** and lever ends **44**, **45** move inwardly toward each other rotating about pivots **54**, **55**. Blade levers **38**, **39** pivot about pivots **68**, **69**, opening jaw ends **41**, **42**. Jaw ends **41**, **42** are closed in a reverse operation.

A second compound linkage is formed rearward of the first compound linkage (i.e. extensions **28** and **29**). This second compound linkage acts in concert with the first compound linkage, increasing the power applied at jaw ends **41**, **42**. Previous attempts at forming double compound cutting tools having transverse coupling (e.g. element **60**) forming separate pivots points **68**, **69** of blade levers **38**, **39** have had operating problems. Specifically, the double compound mechanism, while providing significantly increased power to the cutting jaws, also inhibits the opening of those jaws. In other words, due to the presence of a second compound linkage, jaws **41**, **42** cannot be fully opened. The jaws are limited to opening less than approximately half their fully opened position. In the present invention, fully opened is defined by pivot element **54** and pivot element **55** moving inwardly toward one another until the components come into contact, preventing further movement (as illustrated in FIG. **4**).

In this embodiment, handle lever **12** is formed of a double link, including rearward portion **70** having handle end **18** and forward end **72**, and forward portion **73** having pivot end **15**, and a rearward end **75**. Forward portion **73** is pivotally coupled to rearward portion **70** by a movable pivot element **76** formed by a pin extending concurrently through an aperture **78** formed in rearward portion **70** intermediate forward end **72** and handle end **18**, and a slot **79** formed in forward portion **73** proximate rearward end **75**. A link **80** having a forward end **82** and a rearward end **83** is pivotally coupled to handle lever **14** intermediate handle end **19** and pivot end **16**. Link **80** is pivotally coupled to handle lever **14** by a movable pivot element **85** formed by a pin extending concurrently through an aperture **87** formed in rearward end **83** and a slot **89** formed in handle lever **14** intermediate handle end **19** and pivot end **16**. The second compound linkage is completed by a pivot element **90** formed by a pin extending concurrently through an aperture **92** formed in forward end **72** of rearward portion **70** and an aperture **94** formed in forward end **82** of link **80**. The second compound linkage is formed of pivot elements **76**, **85**, and **90**. It is the presence of pivots riding in slots **79**, **89** which permit jaws **41**, **42** to be fully opened. In the closed position, the pivots are positioned toward a rearward end of slots **79**, **89**, respectively. In the open position, as shown in FIG. **4**, jaws **41**, **42** are fully opened, permitted by the movement of the pivots toward a forward end of slots **79**, **89**. It will be understood that the pivots freely move within slots **79**, **89** and do not engage either forward or rearward ends thereof. Also, it will be understood that pivot elements **76** and **85**, in this preferred embodiment, include slots **79** and **89** and the pivots movable therein.

In one construction of the present invention, the first compound linkage (i.e. extensions **28** and **29** and pivot element **35**) and the second compound linkage (i.e. pivot elements **76**, **85**, and **90** and their associated links) are coupled at pivot elements **35** and **90** by a tie link **100** having a forward end and a rearward end. Tie link **100** includes aperture **102** which aligns with apertures **30**, **32** and aperture **103** which aligns with apertures **92**, **94**. Tie link **100** facilitates opening jaws **41**, **42** to the fully opened position enhanced by slots **79**, **89**. Tie **100** eases opening jaws **41**, **42** to the fully opened position by the interaction between the second compound linkage with the first compound linkage. Movement of the second compound linkage pulls tie link **100** rearwardly, which in turn pulls the first compound linkage to the fully open position.

As can be seen with reference to FIG. **3**, forward ends **15**, **16**, rearward end **75**, intermediate portion of handle lever **14** through which slot **89** is formed, forward end **82**, and extension **29**, are bifurcated or laterally slotted to provide a strong stabilized pivot coupling. It will be understood that while these bifurcations are employed in the preferred embodiment, non-bifurcated ends can also be pivotally coupled.

Turning now to FIGS. **5** and **6**, a modified cutting tool **10'** with double compound leverage (shown in the closed/cutting position) is illustrated in accordance with the present inven-

tion. The various components of cutting tool **10'** that are similar to cutting tool **10** above are designated with similar numbers having a prime (') added to indicate the different embodiment. Also, components that perform the same function as those described above will not be elaborated upon but differences in construction or operation are described in detail.

In this embodiment, handle lever **12'** is formed of a double link, including rearward portion **70'** having handle end **18'** and forward end **72'**, and forward portion **73'** having pivot end **15'**, and a rearward end **75'**. Forward portion **73'** is pivotally coupled to rearward portion **70'** by a movable pivot element **76'** formed by a pin extending concurrently through an aperture formed in rearward portion **70'** intermediate forward end **72'** and handle end **18'**, and a slot **79'** formed in forward portion **73'** proximate rearward end **75'**. A link **80'** having a forward end and a rearward end is pivotally coupled to handle lever **14'** intermediate handle end **19'** and pivot end **16'**. Link **80'** is pivotally coupled to handle lever **14'** by a fixed pivot element **85'** formed by a pin extending concurrently through an aperture formed in the rearward end and a bracket **89'** formed on handle lever **14'** intermediate handle end **19'** and pivot end **16'**. Thus, in this embodiment only one movable pivot element is provided and the opposed pivot element is fixed. In the open position, not shown, jaws **41'**, **42'** can be fully opened, permitted by the movement of the single pivot toward a forward end of slot **79'**. It will be understood that the pivot freely moves within slot **79'** and does not engage either forward or rearward ends thereof (generally as described above). Also, it will be understood that movable pivot element **76'**, in this embodiment, includes slot **79'** and the pivot movable therein. Including only one movable pivot element and connecting the opposed side by a solid bracket results in the handles being closer together in the open mode which gives a better reach, which greatly increases cutting power.

Referring further to both of the above described structures it should be understood that in a preferred embodiment the pin **76'** of the single movable pivot element or the two pins **76** and **85** of the double movable pivot elements are roller pins that rotate within slots **79'** or slots **79** and **89**, respectively. Here it should be understood that a roller pin is a pin that freely rotates about the longitudinal axis (the vertical axis in FIGS. **5** and **6**) of the pin. By providing roller pins within the elongated slots the elements are freer to move relative to each other and friction is substantially reduced. Further, because friction is reduced, the cutting power is substantially increased.

Thus, a new and improved cutting tool with double compound leverage for additional cutting power is provided in which the jaws are capable of fully opening. In the present invention the new and improved cutting tool with double compound leverage for additional cutting includes first compound linkage and second compound linkage pivotally linked together to provide complete opening of the cutting jaws.

Various changes and modifications to the embodiments herein chosen for purposes of illustration will readily occur to those skilled in the art. To the extent that such modifications and variations do not depart from the spirit of the invention, they are intended to be included within the scope thereof, which is assessed only by a fair interpretation of the following claims.

Having fully described the invention in such clear and concise terms as to enable those skilled in the art to understand and practice the same, the invention claimed is:

1. A cutting tool with double compound leverage comprising:

first and second opposed handle levers each including a handle end and a pivot end, one of the first and second handle levers including a double link with a rearward portion defining the handle end and pivotally coupled to a forward portion defining the pivot end;

first and second opposed blade levers each including a jaw end with an inwardly directed cutting blade and a lever end, the first and second blade levers each being pivotally attached intermediate the jaw end and the lever end at spaced apart points to a transverse coupling element, the cutting blades and the jaw ends defining cutting jaws;

one each of the pivot ends of the first and second opposed handle levers pivotally attached to one each of the lever ends of the first and second opposed blade levers;

a first compound linkage and a second compound linkage pivotally coupling the first and second opposed handle levers and the blade levers so as to provide complete opening and closing of the cutting jaws; and

wherein the second compound linkage includes at least one movable pivot element formed by a pivot movable within a longitudinally extending slot and pivotally coupling one of the first and second opposed handle levers to the second compound linkage.

2. A cutting tool with double compound leverage as claimed in claim **1** wherein the second compound linkage includes a pivot element pivotally coupling the rearward portion and the forward portion of the one of the first and second handle levers.

3. A cutting tool with double compound leverage as claimed in claim **1** wherein the at least one movable pivot element movable within the longitudinally extending slot includes a roller pin.

4. A cutting tool with double compound leverage as claimed in claim **1** wherein the second compound linkage includes two movable pivot elements each formed by a pivot movable within a longitudinally extending slot and pivotally coupling each of the first and second opposed handle levers to the second compound linkage.

5. A cutting tool with double compound leverage as claimed in claim **4** wherein the pivot movable within the longitudinally extending slot of each of the two movable pivot elements includes a roller pin.

6. A cutting tool with double compound leverage as claimed in claim **4** wherein the second compound linkage is formed so that the pivots movable within the longitudinally extending slots are positioned adjacent a rear end of the slots when the cutting jaws are closed and adjacent a front end of the slots when the cutting jaws are completely open.

7. A cutting tool with double compound leverage as claimed in claim **1** wherein the transverse coupling element includes at least one elongated plate with openings adjacent opposed ends, one each of the openings being pivotally attached intermediate the jaw end and the lever end of one each of the first and second opposed blade levers.

8. A cutting tool with double compound leverage as claimed in claim **1** wherein the pivot end of the first opposed handle lever is pivotally attached to the lever end of the first opposed blade lever defining a first pivot element and the pivot end of the second opposed handle lever is pivotally attached to the lever end of the second opposed blade lever defining a second pivot element, the first compound linkage pivotally coupling the first pivot element and the second pivot element.

9. A cutting tool with double compound leverage as claimed in claim **8** wherein the first compound linkage pivotally coupling the first pivot element and the second pivot element defines a third pivot element, the second compound

linkage pivotally couples the first and second opposed handle levers to the third pivot element.

10. A cutting tool with double compound leverage as claimed in claim **9** wherein the second compound linkage includes movable pivot elements pivotally coupling the first and second opposed handle levers to the second compound linkage.

11. A cutting tool with double compound leverage as claimed in claim **10** wherein the movable pivot elements have a first position defining a completely open orientation for the cutting jaws and a second position defining a closed or cutting orientation for the cutting jaws.

12. A cutting tool with double compound leverage comprising:

first and second opposed handle levers each including a handle end and a pivot end, one of the first and second handle levers including a double link with a rearward portion defining the handle end and pivotally coupled to a forward portion defining the pivot end;

first and second opposed blade levers each including a jaw end with an inwardly directed cutting blade and a lever end, the first and second blade levers each being pivotally attached intermediate the jaw end and the lever end at spaced apart points to a transverse coupling element, the cutting blades and the jaw ends defining cutting jaws;

one each of the pivot ends of the first and second opposed handle levers pivotally attached to one each of the lever ends of the first and second opposed blade levers;

a first compound linkage and a second compound linkage pivotally coupling the first and second opposed handle levers and the blade levers so as to provide complete opening and closing of the cutting jaws; and

wherein the first compound linkage and the second compound linkage are coupled by a tie link having a forward end and a rearward end, with the forward end of the tie link pivotally attached to the first compound linkage and the rearward end of the tie link pivotally attached to the second compound linkage.

13. A cutting tool with double compound leverage comprising:

first and second opposed handle levers each including a handle end and a pivot end, one of the first and second handle levers including a double link with a rearward portion defining the handle end and pivotally coupled to a forward portion defining the pivot end;

first and second opposed blade levers each including a jaw end with an inwardly directed cutting blade and a lever end, the first and second blade levers each being pivotally attached intermediate the jaw end and the lever end at spaced apart pivot points to a transverse coupling element, the cutting blades and the jaw ends defining cutting jaws;

the pivot end of the first opposed handle lever pivotally attached to the lever end of the first opposed blade lever defining a first pivot element;

the pivot end of the second opposed handle lever pivotally attached to the lever end of the second opposed blade lever defining a second pivot element;

a first compound linkage pivotally coupling the first pivot element and the second pivot element to a third pivot element;

a second compound linkage pivotally coupling the first and second opposed handle levers to the third pivot element so that the cutting jaws are moved into a closed cutting position with movement of the first and second opposed handle levers into a closed orientation and the cutting jaws are moved into a completely opened position with movement of the first and second opposed handle levers into an open.

14. A cutting tool with double compound leverage as claimed in claim **13** wherein at least a portion of the second compound linkage pivotally couples the double link of the one of the first and second handle levers.

15. A cutting tool with double compound leverage as claimed in claim **13** wherein the first compound linkage is formed so that portions of the first pivot element and the second pivot element come into contact when the cutting jaws are moved into the completely opened position.

16. A cutting tool with double compound leverage as claimed in claim **13** wherein the second compound linkage includes at least one movable pivot element pivotally coupling one of the first and second opposed handle levers to the second compound linkage.

17. A cutting tool with double compound leverage as claimed in claim **16** wherein the at least one movable pivot element includes a pivot movable within a longitudinally extending slot and the pivot includes a roller pin.

18. A cutting tool with double compound leverage as claimed in claim **16** wherein the at least one movable pivot element has a first position defining a completely open orientation for the cutting jaws and a second position defining a closed or cutting orientation for the cutting jaws.

19. A cutting tool with double compound leverage as claimed in claim **13** wherein the second compound linkage includes two movable pivot elements each formed by a pivot movable within a longitudinally extending slot and pivotally coupling each of the first and second opposed handle levers to the second compound linkage.

20. A cutting tool with double compound leverage as claimed in claim **19** wherein the pivot movable within the longitudinally extending slot of each of the two movable pivot elements includes a roller pin.

21. A cutting tool with double compound leverage as claimed in claim **19** wherein the second compound linkage is formed so that the pivots movable within the longitudinally extending slots are positioned adjacent a rear end of the slots when the cutting jaws are closed and adjacent a front end of the slots when the cutting jaws are completely open.

22. A cutting tool with double compound leverage comprising:

a first handle lever including a handle end and a pivot end and a second handle lever including a double link with a rearward portion defining a handle end and a forward portion defining a pivot end;

first and second opposed blade levers each including a jaw end with an inwardly directed cutting blade and a lever end, the first and second blade levers each being pivotally attached intermediate the jaw end and the lever end at spaced apart pivot points to a transverse coupling element, the cutting blades and the jaw ends defining cutting jaws;

the pivot end of the first opposed handle lever pivotally attached to the lever end of the first opposed blade lever defining a first pivot element;

the pivot end of the second opposed handle lever pivotally attached to the lever end of the second opposed blade lever defining a second pivot element;

a first compound linkage pivotally coupling the first pivot element and the second pivot element to a third pivot element; and

a second compound linkage pivotally coupling the first and second opposed handle levers to the third pivot element and the forward portion of the second handle lever to the

rearward portion, the second compound linkage including at least one movable pivot element formed by a pivot movable within a longitudinally extending slot and pivotally coupling one of the first and second opposed handle levers to the second compound linkage, and the second compound linkage being formed so that the at least one pivot movable within the longitudinally extending slot is positioned adjacent a rear end of the slot when the cutting jaws are closed and adjacent a front end of the slot when the cutting jaws are completely open.

23. A cutting tool with double compound leverage as claimed in claim **22** wherein the at least one movable pivot element includes a roller pin.

24. A cutting tool with double compound leverage as claimed in claim **22** wherein the second compound linkage includes a tie link with the first compound linkage and the second compound linkage being pivotally coupled by the tie link, the tie link having a forward end and a rearward end with the forward end of the tie link pivotally attached to the first compound linkage at the third pivot element and the rearward end of the tie link defining a fourth pivot element pivotally attached to the two movable pivot elements of the second compound linkage.

* * * * *